

In the Specification:

Please amend the specification as shown:

Please insert the following after paragraph 2:

SEQUENCE LISTING

2.1 The instant application contains a Sequence Listing which has been submitted in ASCII format via EFS-Web and is hereby incorporated by reference in its entirety. Said ASCII copy, created on February 21, 2012, is named 20004200.txt and is 53,194 bytes in size.

Please delete paragraph 179 and replace it with the following paragraph:

179. **Design, expression, and purification of CP-SOCS3 proteins.** Mouse SOCS3 cDNA (675 nt) was obtained (Starr et al. *Nature* 387, 917-21 (1997)). The MTM comprising a 12 amino acid sequence derived from FGF-4 and polyhistidine tag (His) were engineered as described before (Jo et al. *J Cell Biochem* 89:674-87 (2003), Jo et al. *Nat Biotechnol* 19: 929-33 (2001)). His-SOCS3 (HS3), His-SOCS3-MTM (HS3M) and His-MTM-SOCS3 (HMS3) were constructed by amplifying the SOCS3 cDNA from nt 1 to 678 using primer A and B for SOCS3 (225 amino acids), primer A and C for SOCS3-MTM (12 residues added to 225 amino acids of SOCS3) and primer D and B for MTM-SOCS3. The PCR products were subcloned into pGEM-T easy vector (Promega) and cleaved with Nde I. The amplified and cohesive-ended products were cloned into the Nde I site of the 6xHis (SEQ ID NO: 30) expression vector, pET-28a (+) (Novagen). The resulting plasmids were used to express HS3, HS3M and HMS3 proteins under the control of the lacI promoter in *E. coli* strain BL21 (DE3) CodonPlus (Stratagen). The 6xHis-tagged (SEQ ID NO: 30) recombinant proteins were purified by nickel-nitrilotriacetic acid (Ni-NTA) metal-affinity chromatography (as instructed by the supplier, Qiagen) under denaturing condition from *E. coli* BL21 cells grown to an A600 of 0.5-0.7 and induced for 2-3 hours with 0.7 mM isopropyl- β -D-thiogalactoside (IPTG). Following affinity purification, HS3 was reconstituted in refolding buffer A (Tris 50 mM, NaCl 150 mM, L-arginine 0.88 M, reduced glutathione 1 mM, oxidized glutathione 1 mM, EDTA 1 mM, NDSB-201 100 mM, pH 8.0), and HS3M and HMS3 were reconstituted in refolding buffer B that was the same of buffer A except added guanidine HCl 0.55 M, and L-arginine 0.44 M. Reconstituted proteins were dialyzed for 6 h against cell culture medium (DMEM) containing 1% of penicillin-streptomycin and concentrated by ultrafiltration. Regardless of having a hydrophobic MTM or not, the purification process yielded soluble proteins at the concentration of >13 mg/L of bacteria culture, resulting in 30-45% of recovery from the purified proteins in denaturing condition (Fig. 1C). They contained 8-13 μ g of LPS per mg of recombinant protein as determined by the Limulus chromogenic assay

(Associates of Cape Cod). Prepared proteins were stored at -70°C until use.

Primer A: CCGCATATGGTCACCCACAGCAAGTTTCCCGCC (SEQ ID NO:14)

Primer B: CCGCATATGTTAAAGTGGAGCATCATACTGATC (SEQ ID NO:15)

Primer C:

CGCATATGTCAGGGTGCGGCAAGAAGAAGACAGGGAGAAGAACGGCTGCAAGTGGAGCATC
ATACTGATC (SEQ ID NO:16)

Primer D:

CCGCATATGGCAGCCGTTCTTCTCCCTGTTCTTCTTGCCGCACCCGTCACCCACAGCAAGT
TTCCCGCC (SEQ ID NO:17)